

REMARKS

Claims 1-21 are pending in the application. Claims 1 and 13 have been amended. Support for all amendments can be found in the specification as originally filed. Further, Claims 3-5, 8-11, 15 and 16 have been amended to be consistent with the claim from which each depends ("interior" has been amended to be "inner"). New Claims 19, 20 and 21 have been added and are supported in the Specification as originally filed, including at page 69, line 31 to page 70, line 14. No new matter has been added.

REJECTIONS UNDER 35 USC 102(b)

Claims 1-18 stand rejected under 35 USC 102(b) as being anticipated by Hitchins et al. (hereinafter "Hitchins").

It is well established that in order for a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in prior art. The disclosure requirement under 35 USC 102 presupposes knowledge of one skilled in art of claimed invention, but such presumed knowledge does not grant license to read into prior art reference teachings that are not there. See Motorola Inc. v. Interdigital Technology Corp. 43 USPQ2d 1481 (1997 CAFC).

Claims 1 and 13 have been amended to include a syringe having "a body; and a plunger movably disposed within the body, the plunger comprising a wall having inner surface and an outer surface and one or more inwardly projecting flanges fixedly disposed on the inner surface of the wall."

Hitchins discloses that:

Base 312 of plunger 15 preferably includes capture members 420 and 422 protruding rearwardly beyond the rear surface of base 15 by an amount sufficient to capture and retain flanges 414 and 416 of the piston head 412 (see, for example, FIG. 2B). Capture members 420 and 422 are preferably constructed of a flexible material such that capture members 420 and 422 flex radially outwardly when contacted by piston flanges 414

and 416 and subsequently "snap back" to capture piston flanges 414 and 416. While only two capture members 414 and 416 are shown, as clear of one skilled in the art, more than two capture members 414 and 416 can be used with a corresponding change in the shape of the piston head 412 (*Emphasis added*). Col. 12, lines 53-61.

Therefore, Hitchins discloses that:

[T]he capture members include shoulders or abutment surfaces that abut the piston head to prevent disengagement of the piston head and the capture members upon rearward motion of the piston. The plunger is preferably readily releasable from the piston head upon relative rotation of the plunger and the piston head, such that the piston head is no longer abutted by the abutment shoulders (capture members), Col. 5 lines 43-50.

Further, the cantilevered capture members 420, 422 include stems 444 that attach to base 312 and include retention members 440. Col. 14, lines 32-38 and see Fig. 11.

The stems 444 extend from base 312 in the on along axis A (See Fig. 11).

Thus, Hitchins does not disclose the plunger comprising a wall having an inner surface and an outer surface and one or more inwardly projecting flanges fixedly disposed on the inner surface of the wall of Applicant's invention of Claims 1 and 13.

Further regarding Claim 13, Claim 13 includes "a wall having an inner surface defining a retaining shoulder, Hutchins does not disclose a wall having an inner surface defining a retaining shoulder, rather Hutchins discloses a stem 444 disposed in an inner surface and "protruding rearwardly beyond the rear surface of the base 15" where capture members project, rather Hutchins discloses a stem 444 disposed in an inner surface and "protruding rearwardly beyond the rear surface of the base 15" where capture members project. Thus, Hutchins does not disclose any "inner surface defining a retaining shoulder" and therefore does not anticipate Applicant's invention.

Regarding Claims 2-12 and 14-18, Claims 2-12 and 14-18 depend from Claims 1 and 13, respectively, which as discussed above are believed to be allowable. Thus, Claims 2-12 and 14-18 are also believed to be allowable.

NEW CLAIMS

New Claims 19 and 20 are directed to a syringe including a “plunger movably disposed within the body, the plunger comprising a wall having an inner surface and an outer surface and one or more inwardly projecting abutting connection member disposed on the inner surface of the wall, wherein the inwardly projecting abutting connection member terminates in the axial direction at a position along the wall.” Support for the inwardly abutting connection member can be found on page 70, lines 25-28 and in Fig. 11. Hutchins discloses that the base 312 of plunger 15 preferably includes capture members 420 and 422 protruding rearwardly beyond the rear surface of base 15 by an amount sufficient to capture and retain flanges 414 and 416 of the piston head 412 (see, for example, FIG. 2B). Thus, Hutchins does not disclose or suggest Applicant’s invention of new Claim 19 because the capture members 420, 422 extend in the axial direction further than the end of the wall and external to the plunger. Further, Claim 20 depends from independent Claim 19, which is believed to be allowable. Thus, Claim 20 should also be allowable.

Claim 21 is directed to a fluid injection system including the plunger comprising a base member having an inner surface defining a retaining shoulder and one or more inwardly projecting flanges disposed within the inner surface of the base member;

wherein the at least one retaining member on the drive member of the injector is adapted to engage the retaining shoulder on the plunger wall to enable the drive member to retract the plunger with the body of the syringe;

wherein the one or more inwardly projecting flanges on the inner surface are adapted to engage at a position within the base member the one or more outwardly extending flange members on the drive member when the syringe body is rotated about its longitudinal axis, the one or more outwardly extending flange members operable to cause the at least one retaining member on the drive member to disengage the retaining shoulder on the plunger wall upon rotation of the syringe body.

Support for the “inwardly projecting flanges disposed within the inner surface of

the base member” and the “inwardly projecting flanges are adapted to engage at a position within the base member the one or more outwardly extending flange members” can be found on page 70, lines 25-28 and in Fig. 11. Hutchins discloses that the base 312 of plunger 15 preferably includes capture members 420 and 422 protruding rearwardly beyond the rear surface of base 15 by an amount sufficient to capture and retain flanges 414 and 416 of the piston head 412 (see, for example, FIG. 2B) at a position external to the base, and thus outside of the plunger base. Thus, Hutchins does not disclose or suggest Applicant’s invention of new Claim 19 because the capture members 420, 422 extend in the axial direction further than the end of the wall and external to the plunger. Therefore, Claim 21 is believed to be allowable.

In view of the above amendments and remarks, Applicant submits that the claims are in condition for allowance and the Examiner would be justified in allowing them.

Respectfully submitted,

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